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REPORT
ON THE
VICTORIA COAL MINES,

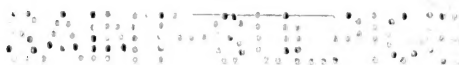
AT LOW POINT, SYDNEY, C. B.

BY

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HALIFAX, N. S.

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JUNE, 1867.

WINDSOR, May 21st, 1867.

GENTLEMEN,

In compliance with your request, dated Halifax, May 1st, 1867, I now beg leave to present you with my report on your mining areas at Low Point, Sydney, Cape Breton.

I am, gentlemen,

Your obedient servant,

HENRY Y. HIND.

Messrs. FRASER, PAINT & Co.

HALIFAX.

NOTE.—The Mining Areas in the following report are at present owned by WM. J. FRASER and HY. N. PAINT, of Halifax, N. S., and HUGH E. ROSS, of Sydney, C. B.

REPORT.

THESE areas lie wholly within the limits of the productive Carboniferous Basin, which occupies a portion of the north-eastern extremity of the Island of Cape Breton, and is known as the Sydney Coal Field of North America.

The southern boundary of the areas is formed by the coast line of the entrance to the Harbor of Sydney, for a distance of two and a half miles; they then extend northerly under the sea.

The rocks, with their associated beds of coal, form a shallow subordinate trough at the edge of a basin extending in a north-easterly direction of unknown extent. The whole of the rim of this basin on the coast of Cape Breton appears to be broken by gentle folds in the strata into a number of minor troughs, so as to resemble a roughly corrugated edge, the folds or wrinkles of which represent the different subordinate coal basins of the northern part of Cape Breton.

The centre of the trough in which your mining areas lie may be supposed to be two and a half miles due north of the Ross Vein, where it appears on the coast. With this point approximately representing the deepest portion of the trough, the northern side will be found to have much less elevation than the southern boundary, in consequence of the anticlinal fold which separates it from the next succeeding trough or corrugation in the rim of the basin, being low in comparison with that on the south side. The effect of this difference will be to cause the measures to lie much flatter and at much greater depth on the northern than on the southern side. The interests involved are of no present importance, but it

appears to have an important bearing on the question whether it would eventually be possible with known appliances to work seams of coal at the depth they probably assume within two and a half miles to three miles of the coast. Any speculations on this question are, however, wholly unnecessary, for within one mile of the coast, and within the limits of the area in question there are 150,000,000 tons of coal, fully one-half of which is available.

The attitude of the rocks on the whole southern boundary of the area shows no disturbance, and a gentle, uniform, but very slight variation of dip. There does not appear to be any reason for apprehension with regard to the existence of faults or fractures, no evidence being visible on the south coast, although there are slight and probably wholly unimportant disturbances apparent on the north-westerly coast of the harbor.

The dip of the rocks is nigh 40 to 44 degrees, but it diminishes rapidly, and at a depth of 200 feet on the slope at the Ross Seam it lessened from 43 degrees to 38 degrees. The dip of the Fraser Seam is about 28 degrees, showing a slight undulation between it and the Ross Seam.

The following table represents the number of seams which have been discovered on these areas and the thickness of each seam, also the quality of the coal as far as ascertained.

NAME.	THICKNESS.	REMARKS.
1. Carr Seam.....	4 feet.	Good Coal.
2. Paint ".....	7 "	Do, do.
3. Crandall Seam.....	5 "	Excellent Coal—Steel Welding } Coal.
4. Lyle ".....	3 "	
5. Ross ".....	7 "	Excellent Coal—a small seam overlies it two chains north.
6. Willie Fraser Seam.	3 "	Do.
7. No. 3 Seam.....	5 "	Indifferent, very ferrugin's.
8. Hugh McGillvray..	45 "	" requires prospecting.
9. 2 Foot Seam.....		Good.
10. 8 Inch ".....		
11. Fraser ".....	7 feet.	Good.

TABLE showing the quantity of Coal in each seam in one square mile :

NAME.	TONS.
1. Carr.....	3,982,620
2. Paint.....	6,969,600
3. Crandall	4,978,285
4. Lyle.....	3,200,000
5. Ross.....	6,969,600
6. Willie Fraser.....	3,200,000
7. No. 3.....	4,978,285
8. H. McGillvray....	3,982,620
9.	
10.	
11. Fraser.....	6,969,600

Total..... 45,230,610 tons in one square mile, or upwards of 135 million tons on the three square miles owned at present by the company.

The questions relating to the character and thickness of the roof between each seam or any set or group of seams are very important, and in the present instance entirely satisfactory.

The vertical distance between the Paint and Crandall Seams is 17 fathoms.

Between Craudall and Ross.....104 fathoms.

“ Ross and Willie Fraser..... 56 “

“ Willie Fraser and McGillvray 15 “

“ McGillvray and Fraser.....149 “

The surface measurements from which these thicknesses were deduced were made by Mr. Ouseley, Provincial Land Surveyor.

The rocks between the seams are heavy bedded sandstones, with intercalated bands of shale. The sandstones are uniform and persistent; the shales are frequently arenaceous and compact, and there is no evidence that dangers or difficulties may arise from working any of the seams under the sea differ-

ent from those to which inland collieries are sometimes subjected, and which can be readily overcome.

The topographical details of the accompanying map are taken from the Admiralty Surveys. The well known capabilities and advantages possessed by Sydney harbor render any allusion to the situation of the areas in relation to harbor accommodation superfluous.

The objections which at the first blush might appear to some in consequence of the necessity of mining under the sea, are wholly imaginary at present and must so remain for many years to come unless unforeseen and improbable contingencies occur. When the workings extend so far under the ocean as to render ventilation a serious question, it will be time to consider the means to be adopted; but as there is accessible coal within a third of a mile from the shore, sufficient to supply 100,000 tons per annum for one hundred years, the subject may well be left till the future.

Very respectfully yours,

HENRY Y. HIND.

		Sandstone	15'
4'		Coal	2'
1.2		Shale	5'
3'		Coal	8"
6"		Shale	12'
		Coal	2'
8"		Sandstone	8'
4"		Coal	6"
1'			
6"			
3'			
1.2			
4'			